

ABSTRACT

Disclosed is a photoelectric conversion device having a multiplying function and an image sensing device using the same. The photoelectric conversion device essentially comprises three layered structure: a carrier generation/multiplication layer composed of amorphous silicon to have both the function of absorbing light and generating carriers through optical excitation and the function of multiplying the generated carriers; an electron injection inhibiting layer composed of an amorphous silicon carbide of the p-type conductivity to inhibit injection of electrons into the carrier generation/multiplication layer; and a hole injection inhibiting layer composed of an amorphous silicon nitride of the n-type conductivity to inhibit injection of holes into the carrier generation/multiplication layer. The said carrier generation/ multiplication layer is provided between said electron injection inhibiting layer and said hole injection inhibiting layer.